

Notice of Allowability

Application No.

10/642,753

Applicant(s)

NAGASAKA ET AL.

Examiner

Art Unit

Remmon R. Fordé

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/04/2005.
2. ☒ The allowed claim(s) is/are 1-23.
3. ☒ The drawings filed on 19 August 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 8/19/2003
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Response To Election

Examiner hereby acknowledges Applicant's election without traverse of Embodiment 2, claims 1-5, 7-12, 16-19 and 23, in correspondence dated 02/04/2005.

Reasons For Allowance

Claims 1-23 are allowed.

The following is an examiner's statement of reasons for allowance:

Claim 1 recites a nonvolatile semiconductor memory device structure including the specific structural limitations of providing a boosting circuit which generates a voltage supplied to the memory cells and includes a capacitor element, the capacitor element including a first and a second semiconductor layer which are formed on a semiconductor substrate and separated from each other, a capacitor insulating film which is formed on the top and side of each of the first and second semiconductor layers and on the semiconductor substrate between the first and second semiconductor layers and which is made of the same material as that of the inter-gate insulating film, and a third semiconductor layer which is formed on the capacitor insulating film and which is connected electrically to the first semiconductor layer and isolated electrically from the second semiconductor layer. The abovementioned structural limitations are

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neither anticipated by nor obvious over the prior art of record. Likewise, claims 2-7 are also allowable as being dependent upon allowable claim 1.

Claim 8 recites a nonvolatile semiconductor memory device structure including the specific structural limitations of providing a boosting circuit which generates a voltage supplied to the first row decoder and which has a capacitor element including a capacitor insulating film made of the same material as that of the inter-gate insulating film, a part of the capacitor insulating film having the same structure as that of a place where an electric field concentrates most in the inter-gate insulating film. The abovementioned structural limitations are neither anticipated by nor obvious over the prior art of record. Likewise, claims 9-23 are also allowable as being dependent upon allowable claim 8.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Relevant Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Otsuki, Shinozaki and Choi et al. each disclose semiconductor memory devices.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Remmon R. Fordé whose telephone number is (571) 272-1916. The examiner can normally be reached on Monday-Thursday (8:00-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Remmon R. Fordé